

Introduction

The Edgewood Chemical & Biological Center at Rock Island Test Facility is a state of the art First Article Test lab capable of verifying metrology, weld certification and hardness testing on a wide variety of products. This facility tests containers, components and packages to the customer's specifications such as ANSI D1.1, ASTM, MIL STD, ISO and numerous others. This lab is also does prototype, reverse engineering, pre- and post-production such as recertification inspection and testing for products.

Metrology Hand Tools

The First Article Inspection and Testing Laboratory has a wide variety of measurement equipment that is used in the determination of metrology readings. These include digital and dial calipers, dial indicators, micrometers ranging from 1 in up to 24 in including blade mics, depth mics and internal mics. All hand tooling equipment is used for checking standard (lengths, diameters, radii, threads) and geometric dimensioned features (angularity, concentricity, circularity, cylindricity, flatness, parallelism, perpendicularity, position, profile, straightness, and runout).

Edgewood Chemical and Biological Center- Rock Island

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Edgewood Chemical and
Biological Center- Rock
Island

First Article Testing Inspection Laboratory



RDECO 
Technology to the Warfighter



Granite Inspection Table



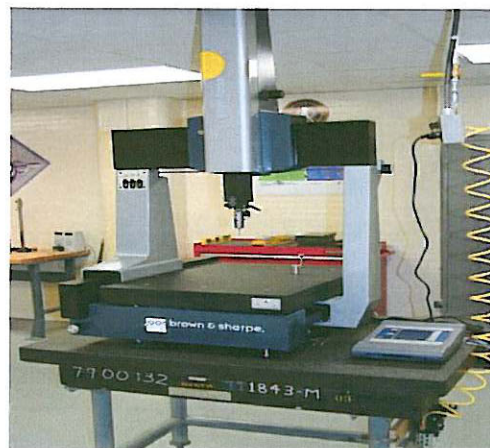
The lab contains a granite inspection table with measurements of 8' by 4'. The table's main function in the lab is to provide a calibrated flat surface in order to make a reference point for all metrology work. Tooling used in conjunction with this table include: vernier height gages, TRI-MOS, inspection blocks, and sine blocks. The table is placed in a temperature controlled atmosphere in order to assure that the calibration remains in effect.

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Our Inspection lab currently has two different sizes of CMM to gain measurement readings for use by the customer. This system is capable of reading and storing measurements taken from the probe tip on a very tight tolerance level. Although the primary use of these machines is to produce verified measurement readings, the system can also be used in the reverse engineering role for products and components. Through the use of a joy-stick type controller the operator has a hands off freedom to allow the machine its tightest tolerance.



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Optical Comparator

The optical comparator for the lab allows us to accurately measure small details that are normally invisible to the human eye. This is a highly accurate, low technology means of insuring that the metrology of the product will be correct and quick. The Eastman Kodak machine uses the telecentric relay lens principle for relaying the contours of the product onto a AutoCAD based Comparator Chart. While the technology may be old and basically low tech it is still regarded as the optical system of choice for high precision optical systems. The optical system provides a constant working clearance and erect images for all measured products.

